Original Article

Evaluation of *Pradhana Sharira* and *Manas Prakriti* (bodily and mental constitution) on disease manifestations in generalized anxiety disorder

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Abstract

Background and Aim: Generalized anxiety disorder (GAD) is the most menacing disorder in Ayurveda and it is equated to *Chittodvega*. The concept of *Prakriti* (human constitution) can be applied for manifestation and prognosis of diseases. Therefore, in this study, we intend to study *Pradhana Sharira* and *Manas Prakriti* (dominant bodily and mental constitution) in *Chittodvega* (GAD) patients.

Methods: *Prakriti* of 101 patients of *Chittodvega* was assessed as per *Prakriti* assessment pro forma. *Vata, Pitta,* and *Kapha Doshas* (bodily humor) dominant *Prakriti* were analyzed according to their characteristics found in the patients.

Results: The data was expressed as percentage. *Vata Pradhana Prakriti* and *Rajas Pradhana Prakriti* patients were found maximum.

Conclusion: Dominant *Vata* and *Rajas Prakriti* has an influence on the manifestations of that *Dosha*-dominant disease *Chittodvega* (GAD).

Key words: *Chittodvega*, generalized anxiety disorder, manas, *Prakriti*, sharira

INTRODUCTION

Jamnagar is the fifth largest city in the Indian state of Gujarat after Ahmedabad, Surat, Vadodara, and Rajkot. Recently, Jamnagar has shot to prominence as Reliance Industries, India's largest private company, established the world's largest oil refinery near the village of Moti Khavdi in Jamnagar.[1] It is also home to an Essar Oil refinery, located near the town of Vadinar.[2] Developing countries such as India where health promotion is relatively unexplored are facing the double burden of diseases, i.e., the combination of long-established, unconquered infectious diseases and rapidly growing diseases related with undesirable lifestyle.

Anxiety is often considered to be the major component of unhealthy lifestyle that contributes significantly to the pathogenesis of not only psychiatric but also many other systemic disorders.[3] This disease is psychosomatic and much common in the Jamnagar city. Therefore, in the present study, we have planned to assess *Pradhana Sharira* and *Manas Prakriti* (dominant bodily and mental constitution) in patients of this disease.

Sharira and *Manas Prakriti* have an important role in *Hetu Skandha* (causative factor), *Linga Skandha* (symptom factor), and *Aushadha Skandha* (treatment factor). Many works have been done on *Sharira Prakriti*, but research on *Manas* and *Sharira Prakriti* with relation to *Vyadhi Utpatti* (disease manifestation) is very few or not available. For *Sharira Prakriti,* it is said that

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Access this article online	
Quick Response Code:	
	Website: www.ijcep.org
	DOI: 10.4103/2348-8832.196895

"*Vataladya Sadatura*."[4] Keeping this particular view in mind, we have selected this problem to explore through the concept of classics as well as through the practical approach made by a planned survey to prove that particular *Sharira-Manas Prakriti* have relation to specific *Vyadhi Utpatti,* i.e., *Chittodvega*. On the basis of manifestation of signs and symptoms, generalized anxiety disorders (GADs) can be equated to *Chittodvega*. According to ayurvedic literatures, *Chittodvega* is *Vata, Rajas,* and *Tamas* dominant.[5,6] Here, an attempt is made to find out the relationship of *Sharira* and *Manas Prakriti* in *Vyadhi Utpatti* through survey pro forma in diagnosed patients of GAD.

MATERIALS AND METHODS

Selection of subjects

A cross-sectional survey was conducted on 101 GAD patients between the age group of 20–60 years, attending the Outpatient Department (OPD) and Inpatient Department of IPGT and RA, Gujarat Ayurveda University, Jamnagar, Gujarat, India, from December 1, 2013, to February 28, 2014, after obtaining the approval from the Institutional Ethics Committee (Ref. PGT/7-A/Ethics/2012–2032/3552 dated 25/02/2013).

The patients were selected using simple random sampling, and written informed consent was taken as per the Helsinki Declaration after offering sufficient explanations about the study and its aims. All patients were interviewed in their local language by a single person. A detailed history was taken according to the *Sharirika* and *Manas Prakriti* pro forma. The anxiety and worry were associated with three (or more) of the following six symptoms such as restlessness, being easily fatigued, difficulty in concentration, irritability, muscle tension, and sleep disturbance (difficulty in falling or staying asleep).

Inclusion criteria

Diagnosed patients with GAD were selected irrespective of their cast, religion, occupation, and sex. Patients between the age group of 20–60 years were included in the study. Diagnostic criteria of GAD were as per DSM-IV.[7] Selection was made by the assessment of excessive anxiety and worry (apprehensive expectation) occurring more for at least 6 months about a number of events of activities, and the person finds difficulty in controlling their worry.

Exclusion criteria

Patients <20 and >60 years of age and with any systemic disorder were excluded from the study. Females with a history of pregnancy and lactation were also excluded from the study.

Assessment of *Prakriti*

The specific research pro forma was made to assess *Sharira-Manasa Prakriti. Prakriti* determination pro forma was prepared having *Vatika, Paitika*, and *Kaphaja* characters with reference to anatomical, physiological, and sociological characters, by following *Brihatrayi* (Charaka, Sushruta, and Ashtanga Hridaya).[8,9] The assessment was made by analyzing the obtained data from the filled questionnaire and physical examination of patients. All anatomical characteristics were assessed by visual and tactile examination. *Vata, Pitta,* and *Kapha Pradhana Prakriti* were analyzed with pro forma according to character found in individuals. Maximum characteristic of any *Dosha* indicates *Pradhana Dosha Prakriti* of that individual. After assessing *Prakriti*, patients were further divided into three categories, i.e., *Vata Pradhana, Pitta Pradhana*, and *Kapha Pradhana Prakriti*. The same method is obtained to assess *Pradhana Manas Prakriti,* i.e., *Sattva Pradhana, Rajas Pradhan*, and *Tamas Pradhana Prakriti*.

A scoring pattern, Hamilton's Anxiety scale, was used for assessing the improvement in signs and symptoms before and after treatment and after follow-up. Influence of psychological factor interfering in the disease process was assessed on standard ayurvedic parameters, and *Manasika Bhava* (mental faculties) was also assessed.

Statistical analysis of data

All the collected survey data were statistically assessed by calculating percentage to identify the *Prakriti* in the causation of diseases mentioned above.

RESULTS

A total of 101 patients of GAD were studied. Baseline characters related to principle variables, namely, age, gender, religion, marital status, occupation, socioeconomic status, etc., are depicted in Table 1. *Sharira Prakriti*-wise distribution of patients is described in Table 2. Factors related to *Sharira Prakriti* of patients with anxiety are depicted in Table 3. *Manas Prakriti*-wise distribution of patients with anxiety is depicted in Table 4. Factors related to *Manas Prakriti* of patients with anxiety are depicted in Table 5.

Vata-dominant *Prakriti* patients were found to be more prevalent (38.61%) in GAD, whereas *Pitta*-dominant and *Kapha*-dominant *Prakriti* patients were 31.68% and 28.71%, respectively. In *Manas Prakriti, Rajas*-dominant *Prakriti* was found to be more prevalent (36.63%), whereas *Satva* and *Tamas*-dominant *Prakriti* were found 32.67% and 29.70%, respectively [Tables 2-4].

Here, *Sattva Pradhana Prakriti* characteristics, namely, *Bhakti* (religious) was found in 78.22%,

Table 1: Demographic distribution of 101 patients of anxiety

Parameters	Divisions	Number of patients	Percentage
Age (years)	20-35	32	31.68
	36-55	46	45.54
	>56	23	21.78
Sex	Female	59	58.42
	Male	42	40.59
Religion	Hindu	95	94.06
	Muslim	5	3.96
	Christian	1	0.99
Marital status	Married	89	88.12
	Unmarried	12	11.88
Occupation	Sitting	80	79.21
	Standing	19	18.81
	Walking	2	1.98
Education	Educated	96	95.05
	Uneducated	5	4.95
Socioeconomic status	Upper	2	1.98
	Middle	89	89.11
	Lower	10	8.91

Table 2: *Sharira Prakriti*-wise distribution of anxiety patients

Prakriti	Number of patients	Percentage
Kapha Pradhana Prakriti	29	28.71
Pitta Pradhana Prakriti	32	31.68
Vata Pradhana Prakriti	40	38.61

Buddhi (intellect) in 58.42%, *Satya* (truthfulness) in 57.43%, *Anrushanshya* (religious activity) in 64.36%, *Samvibhagaruchita* (can differentiate good and bad things) in 51.49%, *Medha* (intellect) in 59.40%, *Dhriti* (determination) in 79.21%, *Kritagyata* (respect the helping person) in 61.39%, *Vyavasaya* (determinant for work) in 59.40%, *Saucha* (hygiene) in 64.36%, *Abhishanga Bhava* (do work without any expectation) in 59.40%, *Dharma* (good behavior by body, speech, and mind) in 66.34%, *Titiksha* (~desire) in 59.40%, *Smriti* (memory) in 59.40%, and *Dakshinya* (helping nature) in 59.40% [Tables 3 and 5].

In *Rajas Pradhana Prakriti* characteristics, namely, *Amitabhashitva* (pleasant speech) was found in 69.31%, *Dukhabahulata* (sorrowful) in 74.26%, *Akarunya* (rude nature) in 65.35%, *Kama* (excessive desireness) in 67.33%, *Atanashilata* (likes traveling) in 65.35%, *Harsha* (excitement) in 74.26%, *Adriti* (~unsteady mind) in 69.31%, *Krodha* (anger) in 61.39%, *Anarya* (bad behavior) in 59.41%, *Maan* (proud) in 75.25%, *Matsarya* (~jealousy of once achievement) in 62.38%, *Anrutikatva* (truth) in 67.33%, *Ahankara* (ego) in 71.29%, *Dambha* (over smartness) in 63.37%, and *Lolupatva* (craving) in 64.36% [Table 5].

In *Tamas Pradhana Prakriti* characteristics, namely, *Pramada* (careless) was found in 47.53%, *Matsarya* in 59.41%, *Vishada* (depression) in 61.39%, *Paratisandhana* (help others without selfishness) in 58.42%, *Shoka* (tension) in 67.33%, *Vipratipatti* (less understanding power) in 62.38%, *Agyana* (~confused) in 54.45%, *Alasya* (fatigue) in 52.48%, *Durmedha* (dull) in 41.58%, *Nastikya* (not religious) in 58.42%, *Kshu-Trishna* (hunger-thirst) in 55.45%, *Nidra* (sleep) in 53.47%, and *Buddhi Nirodha* (disturbed intellect) in 74.26% [Tables 3 and 5].

DISCUSSION

Chitta (mind) + *Udvega* (anxiety) = *Chittodvega,* i.e., anxious status of a mind. The term *Udvega* and *Chittodvega* are used synonymously with reference to anxiety neurosis, anxiety in general, and GAD in particular. However, *Chittodvega* is a more applicable term to illustrate whole anxious state. Hence, in this study, the term *Chittodvega* is compared with generalized anxiety disorder. Patients with GAD have persistent, excessive, and/or unrealistic worry associated with muscle tension, impaired concentration, autonomic arousal, feeling on edge or restless, and insomnia.

GAD is a prevalent psychiatric disorder in the general population and prevalence is approximately 5%.[10] *Chittodvega* is a *Manasavikara* (mental distribution) described by Charaka, which is considered as a perfect word for highlighting the status of anxiety. Anxiety is a universal experience, which has an important protective function in the face of danger.[11] It becomes morbid when symptoms are out of proportion to external circumstances or if they persist long after a threatening situation has been averted. Clinical trials have shown that anxiolytic drugs alone have limited long-term efficacy. Moreover, they often have adverse side effects including dependence, drowsiness, impaired cognition and memory, and sexual dysfunction.[12] Clinical community has begun to consider alternative old and new approaches targeting anxiety problems and to examine the merits of combined and tailored somatic and psychological treatments. Huge progress has been made (and still goes on) in the nonpharmacological treatment of anxiety disorders. In this direction, relaxation techniques stand for one of the most used approaches in the anxiety management worldwide.

In GAD survey, the majority of the patients were in the age group of 36–55 years. According to Charaka, this is the age group of *Madhyamavastha* (young age group), in which *Pitta* is naturally dominant. It is the age of establishment at working place and family responsibility. Hence, more stress and failure will unsteady the mental state. Nowadays, because of change in the lifestyle, anxiety disorders are prevailing in all age groups which were reported in this study too.[13] This age group marks

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Table 3: Factors related to *Sharira Prakriti* of anxiety patients

Prakriti	Anga	Number of patients	Percentage
Kapha Prakriti	Snigdha	38	37.62
	Upachita	30	29.70
	Sthira	20	19.80
	Alpa Santapa	11	10.89
Pitta Prakriti	Shithila	13	12.87
	Gaura	14	13.86
	Tanu	15	14.85
	Ushnanga	04	3.96
Vata Prakriti	Ruksha	34	30.69
	Apachita	33	29.70
	Anavasthita	20	18.81
	Shitanga	10	8.91
Prakriti	**Gatra**		
Kapha Prakriti	Sundara	22	21.78
	Suvibhakta	21	20.79
Pitta Prakriti	Sukumara	38	37.62
	Avadata	27	26.73
Vata Prakriti	Krisha	34	33.66
Prakriti	**Varna**		
Kapha Prakriti	Avadata	26	23.76
Pitta Prakriti	Gaura/Pitta	32	29.70
Vata Prakriti	Aruna/Shyama	43	40.59
Prakriti	**Sharira Sandhi Mansa**		
Kapha Prakriti	Sthira	34	31.68
Pitta Prakriti	Shithila	41	38.61
Vata Prakriti	Chapala	26	23.76
Prakriti	**Sandhi Bandhana**		
Kapha Prakriti	Sushlishta	32	30.69
Pitta Prakriti	Shithila	38	36.65
Vata Prakriti	Shabdagamina	31	29.70
Prakriti	**Cheshta**		
Kapha Prakriti	Manda	54	53.46
Pitta Prakriti	-	-	-
Vata Prakriti	Chapala	37	36.63
	Shigra	20	19.80
	Laghu	08	7.92
	Alpa	06	5.94
Prakriti	**Karya**		
Kapha Prakriti	Ashigra	33	31.68
Pitta Prakriti	Madhyama	35	33.66
Vata Prakriti	Shigra	33	31.68
Prakriti	**Gati**		
Kapha Prakriti	Sara adhisthita	42	39.60
Pitta Prakriti	-	-	-
Vata Prakriti	Laghu/Chapala	59	56.44
Prakriti	**Ahara matra**		
Kapha Prakriti	Alpa	35	33.66
Pitta Prakriti	Prabhuta	36	34.65
Vata Prakriti	Aniyamita	30	27.72
Prakriti	**Kshudha**		
Kapha Prakriti	Alpa	35	32.67
Pitta Prakriti	Dandashuka	28	26.74
Vata Prakriti	Aniyamita	38	36.63
Prakriti	**Trishna**		
Kapha Prakriti	Alpa	50	47.52
Pitta Prakriti	Prabhuta	26	23.76
Vata Prakriti	Aniyamita	25	22.77

Contd...

Table 3: Contd...

Prakriti	Sweda	Number of patients	Percentage
Kapha Prakriti	Alpa	29	27.72
Pitta Prakriti	Prabhuta	37	34.65
Vata Prakriti	Aniyamita	35	32.67
Prakriti	**Sharira Gandha**		
Kapha Prakriti	Alpa	30	28.71
Pitta Prakriti	Prabhuta	35	33.66
Vata Prakriti	Aniyamita	36	33.69
Prakriti	**Drishti**		
Kapha Prakriti	Prasanna	20	19.80
	Shukla	21	20.79
	Raktanta	8	7.92
Pitta Prakriti	Tamra	57	56.43
Vata Prakriti	Chapala	27	26.73
Prakriti	**Mukha**		
Kapha Prakriti	Prasanna	26	25.74
	Priya Darshana	24	23.76
Pitta Prakriti	Ushna	39	38.61
	Tamra	32	31.68
Vata Prakriti	Chapala	30	29.70
	Krisha	29	28.71
Prakriti	**Swara**		
Kapha Prakriti	Prasanna/Snigdha	30	29.70
Pitta Prakriti	Vyathita Asya	30	29.70
Vata Prakriti	Pratata/Ruksha/Krisha	37	36.63
	Bahupralapa	01	0.99
Prakriti	**Darshana**		
Kapha Prakriti	Prasanna/Snigdha	38	35.64
Pitta Prakriti	Prabhuta Piplu Vyanga	37	34.65
Vata Prakriti	Bahukandara	26	23.76
Prakriti	**Bala**		
Kapha Prakriti	Adhika	24	23.76
Pitta Prakriti	Madhyama	58	57.43
Vata Prakriti	Alpa	19	18.81
Prakriti	**Sahishnuta**		
Kapha Prakriti	Klesha Sahishnu	22	19.80
Pitta Prakriti	Ushna Asahishnu	45	44.55
Vata Prakriti	Shita Asahishnu	44	43.56
Prakriti	**Kesha/Shmashru/Loma**		
Kapha Prakriti	Sthira	12	11.88
	Kutila	10	9.90
	Nila/Shyama	03	02.97
	Ghana	05	04.95
Pitta Prakriti	Mridu/Alpa	30	29.70
	Tanu	27	26.73
	Kapila/Pingala	11	10.89
	Palitya/Khalitya	07	6.93
Vata Prakriti	Parusha	48	47.52
	Atyalpa	33	32.67
	Ruksha	33	32.67
	Sphutita	14	13.86
	Dhusara	03	2.97
Prakriti	**Nakha**		
Kapha Prakriti	Shukla	42	41.58
	Snigdha	41	40.59
Pitta Prakriti	Tamra	22	21.78
	Tikshhna	22	21.78

Contd...

Table 3: Contd...

Prakriti	Nakha	Number of patients	Percentage
Vata Prakriti	Dhusara	30	29.70
	Sphutita	29	28.71
	Ruksha	06	6.94
Prakriti	**Agni**		
Kapha Prakriti	Manda	22	20.79
Pitta Prakriti	Madhyama	16	13.86
Vata Prakriti	Vishama	63	61.39
Prakriti	**Nidra**		
Kapha Prakriti	Adhika	15	14.85
Pitta Prakriti	Madhyama	39	37.62
Vata Prakriti	Jagruka	47	46.53
Prakriti	**Trasa/Raga/Viraga**		
Kapha Prakriti	Alpa	18	17.82
	Chirat	6	5.94
	Alpa Krodha	5	4.95
Pitta Prakriti	Kshipra Prakopa Prasada	34	33.66
	Bhuri Krodha	15	14.85
Vata Prakriti	Anishchita	33	32.67
Prakriti	**Smriti**		
Kapha Prakriti	Dhriti mana	15	14.85
	Chiragrahi	16	15.84
	Dirgha Drishti	6	5.94
Pitta Prakriti	Medhavi	11	10.89
	Nipuna Mati	10	9.90
	Tejasvi	11	10.89
Vata Prakriti	Shruta Grahinyo	21	20.79
	Alpa Smriti	31	30.69
Prakriti	**Avayavavisesha**		
Kapha Prakriti	Pralambabaahu	24	23.76
	Prithupinavaksha	18	17.82
	Mahalalata	17	16.83
Pitta Prakriti	UshnaMukha	11	10.89
	Kshipra vali	24	23.76
Vata Prakriti	Supte Unmilitani	15	14.85
	Prabaddhapindika	18	17.82
Prakriti	**Satmya Rasa**		
Kapha Prakriti	Tikta	7	6.93
	Kashaya	3	2.97
	Katu	19	18.81
Pitta Prakriti	Madhura	44	43.56
	Tikta	12	11.88
	Kashaya	2	1.98
Vata Prakriti	Madhura	48	47.52
	Amla	53	52.47
	Patu	30	29.70
Prakriti	**Aharaguna**		
Kapha Prakriti	Ushna (Ruksha)	40	39.60
Pitta Prakriti	Shita	36	35.64
Vata Prakriti	Ushna	18	17.82
Prakriti	**Akshi**		
Kapha Prakriti	Shukla/Pakshmala	25	24.75
	Vishala/Dirgha	21	20.79
Pitta Prakriti	Pingala/Tamra	43	42.57
	Tanu	21	20.79
Vata Prakriti	Dhusara/Alpa Pakshmala	21	20.79
	Vritta	19	18.81

Contd...

Table 3: Contd...

Prakriti	Swapna	Number of patients	Percentage
Kapha Prakriti	Toyada	31	30.69
Pitta Prakriti	Jyoti	15	14.85
Vata Prakriti	Viyati Gacchati	15	14.85
	Shalidruma Gacchati	5	4.95

Table 4: *Manas Prakriti* wise distribution of anxiety patients

Prakriti	Number of patients	Percentage
Sattva Pradhana Prakriti	33	32.67
Rajas Pradhana Prakriti	38	36.63
Tamas Prakriti	30	29.70

maximum struggle for financial stability and social status leading to stress and anxiety. The responsibility of family will also be more during this age.

In the present study, maximum patients were female. It is reported that GAD is found somewhat more frequently in women than men. In the epidemiological studies, the sex ratio is approximately two-third of females.[14] Family responsibility and economic burden may lead to the anxiety in female patients.[15] In the present study, maximum patients were Hindu by religion. This shows a geographical predominance of communities in Jamnagar area and also the number of patients attending the OPD.

The data represent that majority of the patients were married. Married are more prone to anxiety because of marital commitment, child care, and other family problems. Unmarried are also prone to disease because of lacking of emotional outlet which was reported in this study too. A recent report also proves that marital satisfaction among working hardly gets disturbed due to their multiple roles, but the thought processes seemed to be disturbed that is manifested in the higher anxiety among them.[16]

In the present study, maximum patients were having sitting occupation. It suggests that disease prevails in all occupational groups as a result of faulty coping mechanism. Employed people undergo more mental strain compared to the unemployed due to stress at the workplace. Homemakers are prone to stress due to excessive family responsibilities; most of the patients had a feeling of not being loved and attended by their spouse. Mental stress can be caused by exposure to a traumatic event, exposure to workplace or occupational, violence, harassment, work pressure, and suicide or attempted suicide.[17] In the present study, maximum patients were educated. It is evident that 49% of anxious adults report having left education early. Anxiety also leads to poor academic performance and underachievement.[18]

The study shows that a maximum number of patients were from the middle class. Thus, data suggest that lower middle-class people may have more struggles in life. As a result of continuous exposure to stress with poor coping strategy, persons are easily prone to GAD. Studies also report that middle-class family is more prone to anxiety.[19]

A maximum number of patients of GAD have *Vata Pradhana Prakriti.* At the biological level, *Vata* is a controller (*Niyanta*) and motivator (*Praneta*) of mind and seems to play a major role in the onset of *Chittodvega*.[20] Due to *Chala guna* (moving property), *Vata Dosha* can do *Udvega* (disturbance) of *Mana*. So that *Vata* is main *Dosha* in the *Chittodvega*. *Vata Prakriti* patients are more prone to *Chittodvega*. The present study also proves the higher incidence of *Chittodvega* in *Vata Pradhana Prakriti* persons.
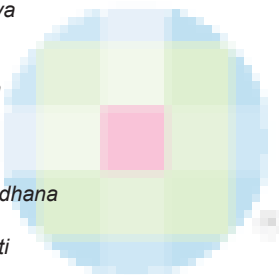
In patients with anxiety disorder, *Vata Prakriti Lakshana,* namely, *Ruksha Anga* (dry body parts), *Aruna* (grayish)/ *Shyama* (blackish) *Varna* (color), *Laghu* (light)/*Chapala* (unsteady) *Gati,* and *Parusha* (excessive dryness) *Kesha* (hair)/*Shmashru* (eyelashes)/*Loma* (body hair) was found in maximum number of patients. In patients with anxiety disorder, *Vata Prakriti Lakshana,* namely., *Amla Rasa* and *Ushna (Ruksha) Aharaguna* (diet property) were found *Satmya* (wholesome) in maximum patients. *Vata* is major *Dosha* for the manifestation of disease *Chittodvega*.

In patients with anxiety disorder, *Vata Prakriti Lakshana*, namely, *Alpa Smriti* (less memory) was found maximum. Excessive *Alpa Smriti* leads to *Prajnaparadha* (disturbance in intellect) which may be the triggering factors for the mental disorders. Anxiety associated with decreased short-term memory capacity, general memory deficits, and poor recall of previously mastered materials.[20]

Among five subtypes of *Vata, Prana, Vyana*, and *Udana* are directly involved with mental activities. The etiological factors of vitiation of *Prana, Udana,* and *Vyana Vayu* may also affect the mental activities adversely. *Vata* is also responsible for *Mano Vyapara* (mental functions) and gives rise to symptoms such as *Bhaya* (fear), *Shoka* (sorrow), and *Pralapa* (excessive talkativeness) and further leading to *Balahani* (loss of strength) and *Sukhahani* (loss of happiness) may be because of dominance of *Laghu Guna* (light property). Hence, *Vata Prakriti* people are more prone to mental disorders including *Chittodvega*.

Table 5: Factors related to *Manas Prakriti* of anxiety patients

Prakriti	Lakshana	Number of patients	Percentage
Sattva Pradhana Prakriti	Bhakti	79	78.22
	Buddhi	59	58.42
	Satya	58	57.43
	Anrushanshya	65	64.36
	Samvibhagaruchita	52	51.49
	Medha	60	59.40
	Dhriti	80	79.21
	Kritagyata	62	61.39
	Vyavasaya	60	59.40
	Shaucha	65	64.36
	Abhishanga Bhava	60	59.40
	Dharma	67	66.34
	Titiksha	60	59.40
	Smriti	60	59.40
	Dakshinya	60	59.40
Rajas Pradhana Prakriti	Amitbhashitva	70	69.31
	Dukhabahulata	75	74.26
	Akarunya	66	65.35
	Kama	68	67.33
	Atanshilata	66	65.35
	Harsha	75	74.26
	Adhriti	70	69.31
	Krodha	62	61.39
	Anarya	60	59.41
	Maan	76	75.25
	Matsarya	63	62.38
	Anrutikatva	68	67.33
	Ahankara	72	71.29
	Dambha	64	63.37
	Lolupatva	65	64.36
Tamas Pradhana Prakriti	Pramada	48	47.53
	Matsarya	60	59.41
	Vishada	62	61.39
	Paratisandhana	59	58.42
	Shoka	68	67.33
	Vipratipatti	63	62.38
	Agyana	55	54.45
	Alasya	53	52.48
	Durmedha	42	41.58
	Nastikya	59	58.42
	Kshu-Trishna	56	55.45
	Nidra	54	53.47
	Buddhi Nirodha	75	74.26

In patients with anxiety disorder, *Kapha Prakriti Lakshana*, namely, *Manda Cheshta* (less activity) and *Ashigra Karya* (slow activity), *Prasanna* (pleasant)/*Snigdha* (~soft) *Swara* (voice) and *Darshana* (appearance), *Shukla Nakha* (white nails), and *Pralambabahu* (long extremities) were found. Physical inactivity may also be associated with the development of mental disorders. Some clinical and epidemiological studies have shown associations between physical activity and symptoms of depression and anxiety in cross-sectional and prospective longitudinal studies.[21,22]

Pitta Prakriti Lakshana, namely, *Sukumara Gatra* (soften extremities), *Shithila Sharira Sandhi Mansa* (sluggish joints and muscles) and *Sandhi Bandhana* (~joint compactness), *Tamra Drishti* (yellowish vision), and

Ushna Mukha (hot mouth) was found maximum in anxiety disorder. It may be because of *Ushna* and *Mridu* (flexible) *Guna* of *Pitta*.[18] *Prabhuta Aharamatra* (excessive quantity of diet), *Aniyamita Kshudha* (disturbed hunger) and *Alpa Trishna* (less thirst), *Madhyama Bala* (normal strength), and *Ushna Asahishnu* (hot intolerance) were found in a maximum number of patients. Nutrition of the mind also depends on the diet. Chandogyopanis had stated that the minute part (1/3 part) of the food nourishes the mind. There is a positive association between anxiety and eating disorders, and some of them suggest that anxiety disorders precede eating disorders. High prevalence of binge eating disorder and isolated binge eating episodes as well as symptoms of anxiety, depression, and a high degree of preoccupation with body image in severely obese patients.[23,24]

In anxious patients, *Vata Prakriti Lakshana*, namely, *Visham Agni* (normal digestive power) and *Jagaruka* (~disturbed sleep) were found in majority of the patients. Acharya Charaka states that grief, fear, anger, sorrow, excessive sleep, and excessive vigil vitiate *Agni*, which leads to many somatic disorders related to *Ama* (~free radicals). In *Chittodvega,* i.e., anxiety disorder, various types of gastrointestinal symptoms are found which may be attributed to vitiated *Manasika Dosha*. Most anxiety disorders are moderately associated with reduced sleep quality. Individuals with anxiety disorders and poor sleep experience significantly worse mental health-related quality of life and increased disability compared to those with anxiety disorders alone.[25] Psychosocial vulnerabilities and impaired glucose metabolism, by documenting significant associations between anxiety and clinical indicators of glycemic control among women without diabetes.[26]

In patients with anxiety, *Pitta Prakriti Lakshana* namely, *Kshipra Prakopa Prasada* (immediate anger and calmness) was found in a maximum number of patients. It is because of *Tikshna Guna* of *Pitta*. Excessive *Krodha* (anger) because of *Tikshna Guna* of *Pitta* creates vitiation *Pitta* which may further vitiate *Vata* and *Kapha Dosha*. *Tridosha* plays an important role in the manifestation of the disease *Chittodvega*. According to Bowlby (1973), anger and anxiety tend to co-occur in close relationships for two reasons. First, situational factors that elicit anger (such as the failure of attachment figures to offer sufficient comfort or support in times of need) may increase anxiety by raising questions about a partner's long-term commitment and availability. Second, once it is expressed, anger should further amplify anxiety, especially in people who worry about possibly driving their attachment figures away.[27] Consequently, anger may not always be expressed directly in relationships; instead, it may be held in check or displaced to other individuals or objects.[25]

Maximum patients have *Rajas Pradhana Prakriti* in anxiety disorders. Vitiation of *Prana, Udana*, and *Vyana Vayu; Sadhaka Pitta* and *Tarpaka Kapha* lead to *ManoDushti* (vitiation of mind) and produce conditions as *Indriyopaghata* (disturbance in sense function), *Utsahabhramsa* (~unhappiness), etc.[28] *Manas Dosha* is regarded as an initiating causative factor for the disease. *Rajas* and *Tamas* which, respectively, represent *Roshamsha* (excitement) and *Mohamsha* (inhibitor) are causative factors for *Chittodvega*. Among two *Dosha, Rajas* plays an important role, and it is the driving force behind all emotions.[29] In the present study, it is also proved that *Rajas Dosha*-dominant *Prakriti* has a higher prevalence of *Chittodvega.*

Limitations of the study

In the present study, the sample size was limited and to account for heterogeneity among participants, the trial must be quite large with a longer duration of follow-up to achieve better statistical significance. Nevertheless, the outcomes of this study can be considered as a lead for further well-stratified studies covering larger population.

CONCLUSION

Prakriti plays an important role to predict the susceptibility of the manifestation of disease, and it is also possible to predict the probable clinical features of each *Prakriti* type. This would give us an opportunity to predict clinical features and will be helpful in taking preventive measures on how they should be avoided and cured. This kind of study would further help in selecting the drugs and treatment modalities and also be helpful in the prevention and progression of the disease. Therefore, it is concluded that the dominant *Dosha* involved in *Sharirika* and *Manasika Prakriti* of a person have more possibilities of manifestation of the same *Dosha*-dominant disease.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Available from: http://www.ril.com/html/aboutus/manufact_jamnagar.html. [Last accessed on 2016 Jan 27].
2. Essar Oil Refinery, Vadinar, Gujarat. Hydrocarbons Technology. Available from: www.hydrocarbons-technology.com/projects/essar [Last accessed on 2016 Jan 27].
3. Gupta N, Khera S, Vempati RP, Sharma R, Bijlani RL. Effect of yoga based lifestyle intervention on state and trait anxiety. Indian J Physiol Pharmacol 2006;50:41-7.
4. Acharya YT. Charaka. In: Charaka Samhita, Sutrasthana, Na vegannadharaniya. 7th ed. Varanasi: Chaukhambha Orientalia; 2002. p. 69.
5. Acharya YT. Charaka. In: Charaka Samhita, Sutrasthana, Vatakalakaliya. 7th ed. Varanasi: Chaukhambha Orientalia; 2002. p. 78.
6. Acharya YT. Charaka. In: Charaka Samhita, Sutrasthana, Ritucharya. 7th ed. Varanasi: Chaukhambha Orientalia; 2002. p. 68.
7. Andrews G, Hobbs MJ, Borkovec TD, Beesdo K, Craske MG, Heimberg RG, *et al.* Generalized worry disorder: A review of DSM-IV generalized anxiety disorder and options for DSM-V. Depress Anxiety 2010;27:134-47.
8. Acharya YT. Charaka. In: Charaka Samhita, Sharirasthana, Katidhapurushiya. 7th ed. Varanasi: Chaukhambha Orientalia; 2002. p. 288-300.
9. Sharma S. Vagbhatta. In: Asthanga Sangraha, Sharirasthana, Prakritibhediya. 4th ed. Varanasi: Chaukhambha Sanskrit Series Office; 2010. p. 311-28.
10. Vermani M, Marcus M, Katzman MA. Rates of detection of mood and anxiety disorders in primary care: A descriptive, cross-sectional study. Prim Care Companion CNS Disord 2011;13. pii: PCC.10m01013.

11. Available from: http://www.generalhealthtopics.com/generalized-anxiety-disorder-universal-problem-663.html. [Last accessed on 2016 Jan 27].
12. Manzoni GM, Pagnini F, Castelnuovo G, Molinari E. Relaxation training for anxiety: A ten-years systematic review with meta-analysis. BMC Psychiatry 2008;8:41.
13. Regier DA, Rae DS, Narrow WE, Kaelber CT, Schatzberg AF. Prevalence of anxiety disorders and their comorbidity with mood and addictive disorders. Br J Psychiatry Suppl 1998;6:24-8.
14. Frances A. Saving normal: An insider's revolt against out-of-control psychiatric diagnosis, DSM-5, big pharma and the medicalization of ordinary life. Psychother Aust 2013;19:14.
15. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry 2005;62:593-602.
16. Aleem S, Danish L. Marital satisfaction and anxiety among single and dual career women. J Indian Acad Appl Psychol 2008;34:141-4.
17. Available from: http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/416/Workrelated_Mental_Disorders_Australia.pdf. [Last accessed on 2016 Jan 27].
18. Available from: http://www.cheri.com.au/CHERIAnxandEd_final.pdf.pdf. [Last accessed on 2016 Jan 27].
19. Dickey S. The pleasures and anxieties of being in the middle: Emerging middle-class identities in urban South India. Mod Asian Stud 2012;46:559-99.
20. Acharya YT. Charaka. In: Charaka Samhita, Sutrasthana, Tristreshniya. 7th ed. Varanasi: Chaukhambha Orientalia; 2002. p. 69.
21. Paradkara HS. Vagbhatta. In: Astanga Hridaya, Sutrasthana, Vatashonita. 8th ed. Varanasi: Chaukhambha Sanskrit Sansthana; 2010. p. 536.
22. Paradkara HS. Vagbhatta. In: Astanga Hridaya, Sutrasthana, Vatashonita. 8th ed. Varanasi: Chaukhambha Sanskrit Sansthana; 2010. p. 538.
23. Blumenthal JA, Babyak MA, Moore KA, Craighead WE, Herman S, Khatri P, et al. Effects of exercise training on older patients with major depression. Arch Intern Med 19995;159:2349-56.
24. Acharya YT. Charaka. In: Charaka Samhita, Sutrasthana, Rogbhishagjitiya. 7th ed. Varanasi: Chaukhambha Orientalia; 2002. p. 277.
25. Ramsawh HJ, Stein MB, Belik SL, Jacobi F, Sareen J. Relationship of anxiety disorders, sleep quality, and functional impairment in a community sample. J Psychiatr Res 2009;43:926-33.
26. Thornton C, Russell J. Obsessive compulsive comorbidity in the dieting disorders. Int J Eat Disord 1997;21:83-7.
27. Tsivil'ko MA, Korkina MV, Briukhin AE, Bushenina SD, Lineva TI. Obsessive-phobic disorders in anorexia and bulimia nervosa. Zh Nevrol Psikhiatr Im S S Korsakova 1997;97:16-9.
28. Tsenkova VK, Albert MA, Georgiades A, Ryff CD. Trait anxiety and glucose metabolism in people without diabetes: Vulnerabilities among black women. Diabet Med 2012;29:803-6.
29. Stayton DJ, Ainsworth MD, Main MB. Development of separation behavior in the first year of life: Protest, following, and greeting. Develop Psychol 1973;9:213-14.